CLAIMS

1.   A method of allocating transmission resources (209)
by a resources server (204) in a telecommunication
network (202-204) connecting users (202, 203),
characterized in that:

    - users who have logged on are classified into
classes representative of their contracts or the services
for which they have contracted,

    - a transmission resource is allocated to each user
who is in the process of communication in compliance with
the class of his contract or service, and

    - the classes are organized in a scanning cycle, the
frequency at which each class appears in said cycle
following a geometrical progression.

2.   A method according to claim 1, characterized in that
a transmission resource is allocated to each user who is
in the process of communication in compliance with the
class of his contract or service and his requirement.

3.   A method according to claim 1 or claim 2,
characterized in that:

    - for classification, a table (400) is created
including for each user:

        - a reference field (401) relating to an
          identity of the user,

        - a field (405) for designating a user to be
          serviced before that user, and

        - a field (404) for designating a user to be
          serviced after that user, and

    - available transmission resources are allocated to
the various users in accordance with an order resulting
from said table.

4.   A method according to claim 3, characterized in
that:

    - the requirements of users are stored in a field

(408) of the table, and

     - the requirements of users are updated as and when they are stated and/or serviced.

5.   A method according to ~~either~~ claim 3 ~~or claim 4,~~ characterized in that the table is updated as and when network users start and stop communicating.

6.   A method according to ~~any one of~~ claims 1 ~~to 5,~~ characterized in that:

    - users who have logged on are divided into a plurality of lists representative of levels of resource allocation priority,

    - said lists are organized into a binary tree (300) with a root node, intermediate nodes and final nodes referred to as leaf nodes,

    - the depth of the tree is fixed, which defines a number of nodes and a number of paths,

    - the root node is associated with a list of users with higher priority levels,

    - on descending the tree, each intermediate node is associated with a list and the associated lists contain users with progressively lower priority levels according to the level of the node,

    - the leaf nodes are each associated with a list and the lists associated with the leaf nodes contain users with lower priority levels,

    - each path contains the root node, an intermediate node of lower level, an intermediate node of still lower level, and so on, and a leaf node,

    - the binary tree is scanned from its root node to its leaf nodes and at each tree node encountered the associated list is scanned to allocate the resources to the subscribers in that list who have logged on,

    - all the paths are scanned one after the other, and

    - each node of a given level in the tree appears a number of times in the set of paths corresponding to its

level, the number of paths in which is a power of 2.

7. A method according to claim 6, characterized in that:
-   communication time is divided into cycles (601,
5   602),
-   each cycle is divided into frames, for example 8
frames each of 5 milliseconds,
-   each frame is divided into time slots, for example
100 time slots per frame, and
10   -   the resource is allocated in the form of a number
of time slots per cycle.

8. A method according to either claim 6 or claim 7,
characterized in that the resource allocated is in the
form of code, for example in the case of code-division
15 multiple access (CDMA).

9. A method according to either claim 7 or claim 8,
characterized in that:
-   a path of the tree of lists of users is scanned,
-   resources corresponding to the requirements of the
20 users present in the lists of said path are allocated
without the resources allocated being able to exceed one
frame,
-   if unallocated time slots remain at the end of
scanning said path they are allocated to other users who
25 have entered into contracts for lower priority services,
and
-   if the size of the frame is exceeded, the
allocation requirements are transferred to a frame of a
subsequent cycle.

30 10. A method according to any one of claims 6 to 9,
characterized in that the tree of lists of users or a
path of that tree is scanned as long as an allocatable
resource threshold is not reached.

11. A method according to ~~any one of~~ claims 8 ~~to 10,~~ characterized in that the order of scanning the lists of users in a table contained in memory (Table 1) is stored.

12. A resource allocation system characterized in that it includes means for implementing a method according to ~~any of~~ claims 1 ~~to 11.~~